

A Consuming Passion

While there is no evidence that early Hindus were any more or less active traders than other civilizations, they did leave us a commodity market classification scheme we can use today with Brahma the creator, Vishnu the maintainer and Shiva the destroyer. The linkage between commodity producers' equities and the prices of those commodities, (see "The Producers," *Futures*, June 2002) Brahma if you will, is relatively straightforward.

We now turn to those Shiva companies whose profit margins depend, in all or part, on the costs of commodities they consume. The phrase "in all or part" is critical; the percentage of most firms' total cost picture represented by commodity prices is fairly small. Think about the corn content in a box of cereal, and you get the picture.

The emerging world of single stock futures and other exchange-traded equity derivative products will allow individual traders to blend their knowledge of physical commodities with equity and index trading to construct trades reflecting these individual economic factors. Sophisticated hedge funds have added to or subtracted commodity exposure from financial portfolios for years; careful construction of exchange-traded equity derivatives will now allow the individual investor to participate in these trades as well.

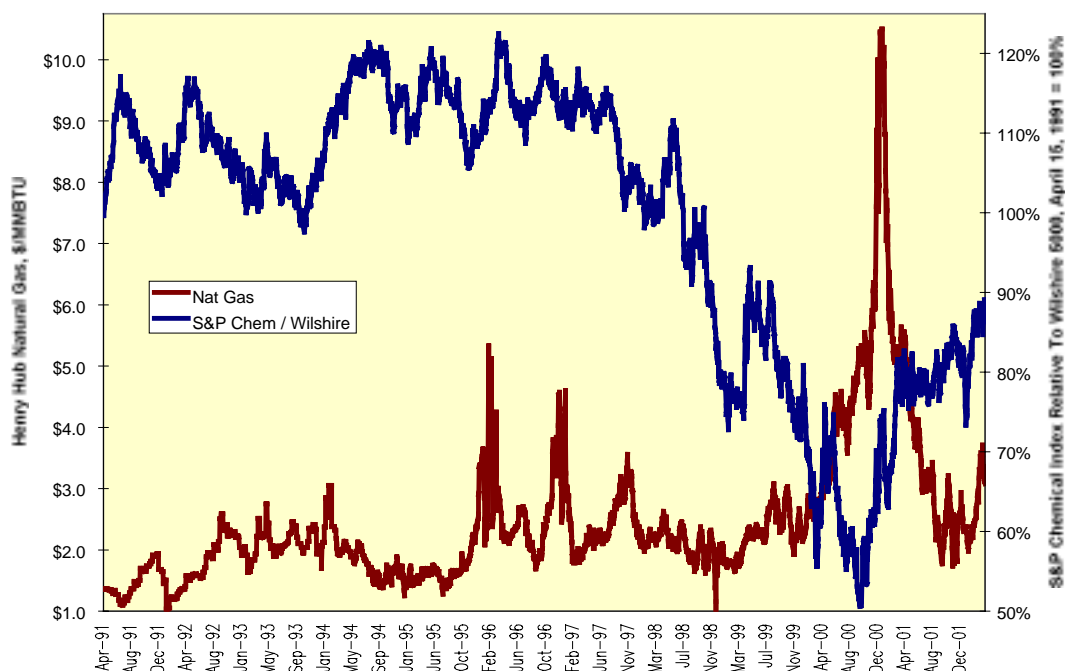
Petrochemicals

One industry wherein the effect of feedstock prices is pronounced is petrochemicals, especially those non-specialty petrochemicals like polyethylene and polypropylene that are commodity products themselves. Since it is difficult to add value to a commodity petrochemical – what, your plastic bag is better? – competitive advantage rests on increasing production efficiencies and on controlling costs. The violent rise and fall of natural gas prices in 2000-2001 should have alternatively compressed and expanded operating margins of the S&P 500 Chemicals index, the majority of whose market weight is concentrated in just two firms, Du Pont and Dow Chemical.

<u>S&P 500 Chemicals Index</u>	<u>Weight</u>
Du Pont (E.I.) de Nemours & Co	34.39%
Dow Chemical Co	21.28%
Air Products & Chemicals Inc	8.21%
Praxair Inc	6.80%
PPG Industries Inc	6.56%
Rohm & Haas Co	6.23%
Ecolab Inc	4.11%
Engelhard Corp	2.99%
Eastman Chemical Co	2.64%
International Flavors & Fragrances Inc	2.53%
Sigma-Aldrich Corp	2.34%
Great Lakes Chemical Corp	0.97%
Hercules Inc	0.95%

We can compare the relative performance of this index to the broad market, as represented by the Wilshire 5000, as a function of spot natural gas prices at Henry Hub, Louisiana. The most obvious feature is how the economically sensitive chemicals industry underperformed the broad market in the late 1990s, before, during and after the collapse of the technology bubble. This underperformance continued until September 2000, three months before the eventual top of the natural gas market. Then, this supposedly Old Economy group began a steady outperformance of the broad market even as a manufacturing recession took hold and a strong dollar cut into the profitability of exports.

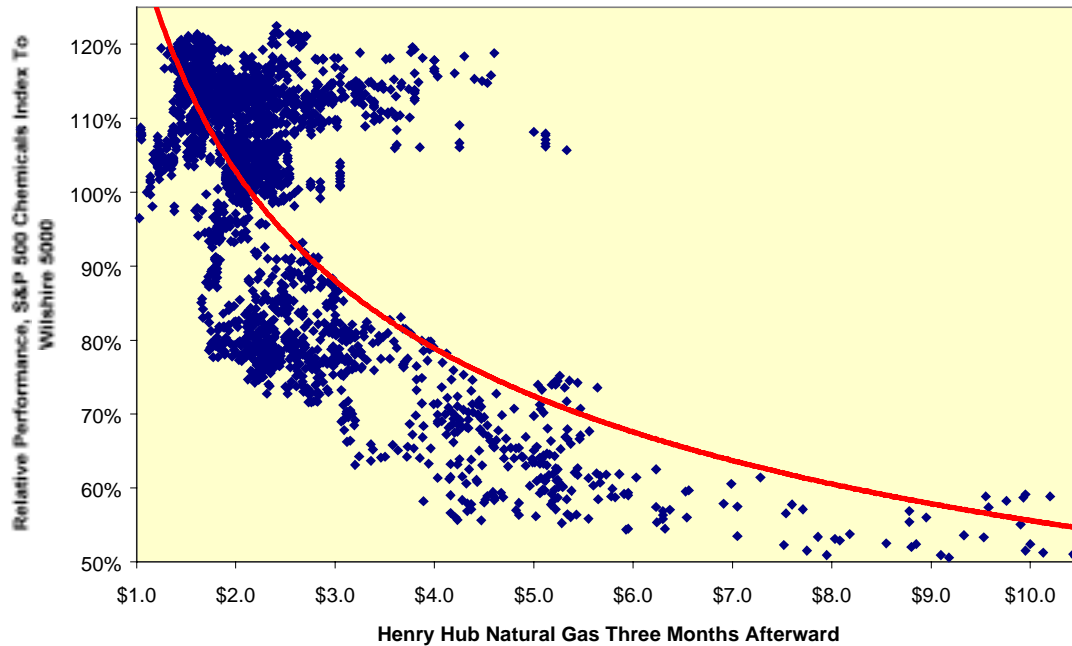
Chemical Stocks Anticipate Natural Gas Prices



Markets are anticipatory mechanisms, and if this is the case with the relationship between the chemical stocks and natural gas prices, we should expect to see a consistent lead/lag relationship, and we do. The relative performance of the chemical index to the Wilshire 5000 appears to lead natural gas prices by three trading months, here defined as 63 days. While other factors enter into the equation, we certainly can see how an equity trade of single stock futures against an index future, say the S&P 500, can be matched with a three-month in-advance trade in natural gas futures.

Any buyer of any commodity wants the profit profile of a put option relative to that commodity. This allows the buyer to enjoy the benefits of lower commodity prices while being protected from higher commodity prices. The trendline of the chemical industry's relative performance as a function of natural gas prices describes a put option well.

A Three-Month Lead



Planes, Trains, And Trucks

In theory, the entire transportation sector should be simple to analyze in commodity consumption terms: You burn fuel to move things. It's a nice theory, isn't it? In reality, the airline sector is a garbled mess of oligopolistic pricing, union contracts, government subsidies, and some of the most cockamamie pricing schemes yet devised by the human mind. The railroad and trucking industries have a slightly greater resemblance to competitive economics, but they, too, have a maze of subsidies ranging from federal maintenance of highways to Amtrak subsidies.

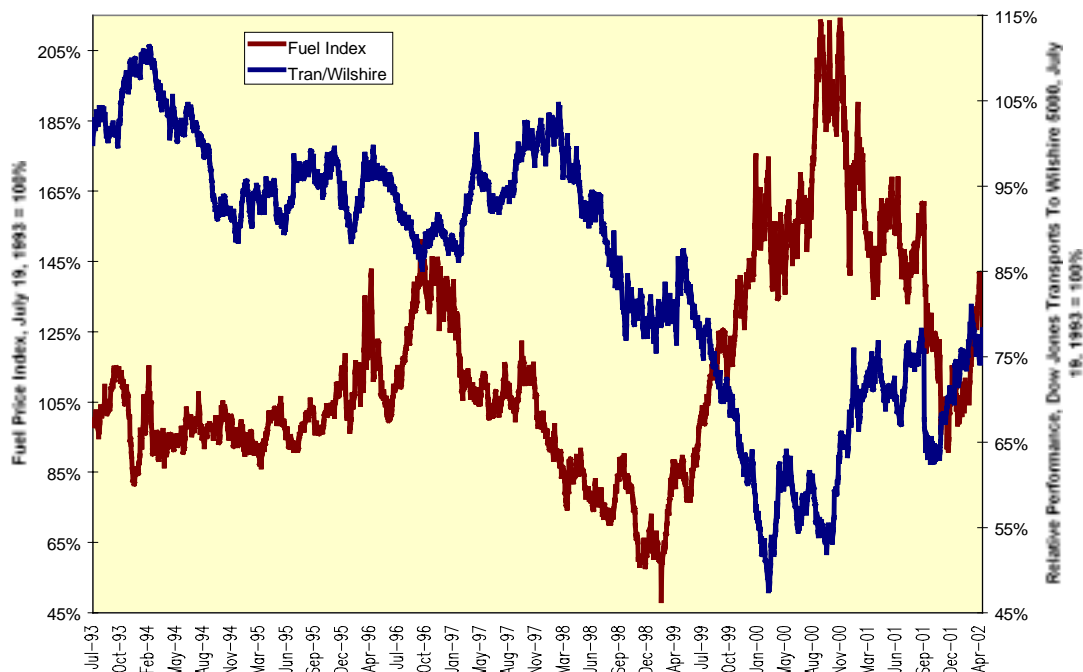
We'll just have to take a deep breath, recognize the presence of these distortions, and compare the venerable Dow Jones Transportation Average's relative performance as a function of a fuel price index consisting of 60% diesel fuel and 40% jet kerosene. Both of these fuels track exchange-traded heating oil futures reasonably well over a long period of time. Since the Dow Jones indexes are price, not capitalization-weighted, the composition of this index is not as lopsided as the mix seen for the S&P Chemicals index.

<u>Dow Jones Transportation Index</u>	<u>Weight</u>
Union Pacific Corp	9.99%
FedEx Corp	9.31%
CSX Corp	6.35%
Usfreightways Corp	6.09%
Roadway Corp	5.72%
CNF Inc	5.63%
GATX Corp	5.60%
Delta Air Lines Inc	5.26%
Ryder System Inc	5.13%
Burlington Northern Santa Fe Corp	4.98%
Alexander & Baldwin Inc	4.74%
JB Hunt Transport Services Inc	4.65%
Yellow Corp	4.64%

AMR Corp/Del	4.23%
Norfolk Southern Corp	4.14%
Northwest Airlines Corp	3.31%
Southwest Airlines Co	3.26%
Airborne Inc	3.21%
UAL Corp	2.67%
US Airways Group Inc	1.10%

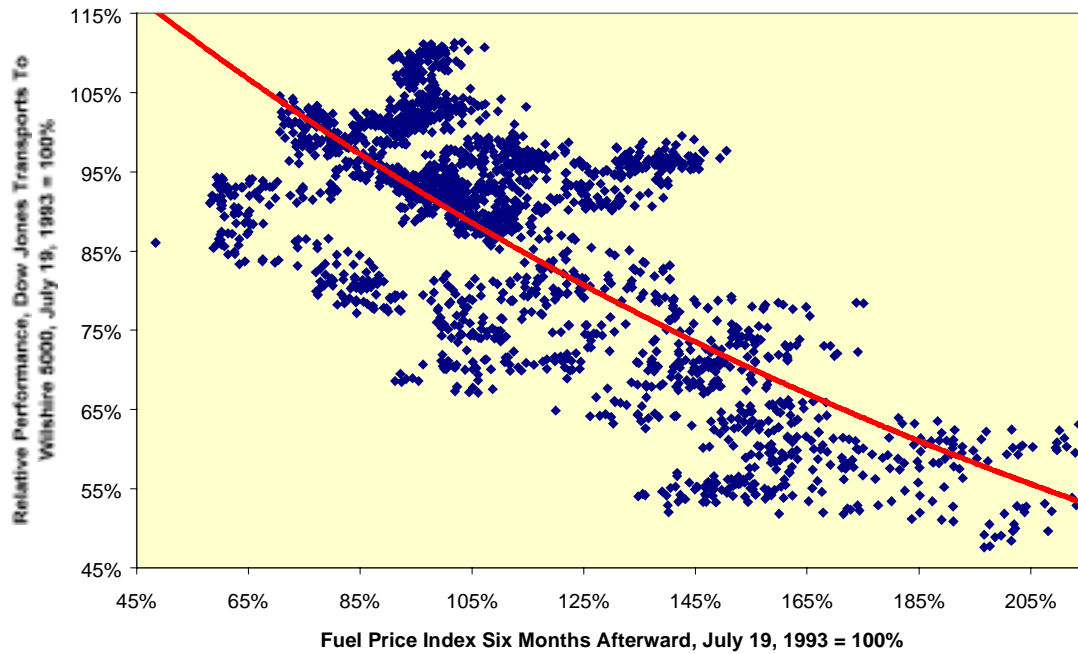
The longer lead times involved in refinery operations and the lower seasonal cycles associated with petroleum products relative to natural gas create a longer lead/lag relationship between petroleum consumers' stocks and petroleum prices. The lead-time for an extreme in backwardation or contango to be reflected in a price reversal ranges between six and nine months (see "A Crude Comparison," *Futures*, September 1997, or "Another Crude Comparison," *Futures*, May 1998). The lead-time seen between the relative performance of the Dow Jones Transportation Average and the fuel price index is on the order of 130 days, or approximately six trading months.

Transports Anticipate Fuel Costs



With this lead-time factored into the equation, the profit profile of the Transportation Average relative to the fuel price index once again resembles that of a put option on the commodity. A trade of a similar structure to that suggested for the chemical issues, either buying or selling the transportation stocks against a broad market index and then taking an opposite position in heating oil futures or options six months hence, is suggested.

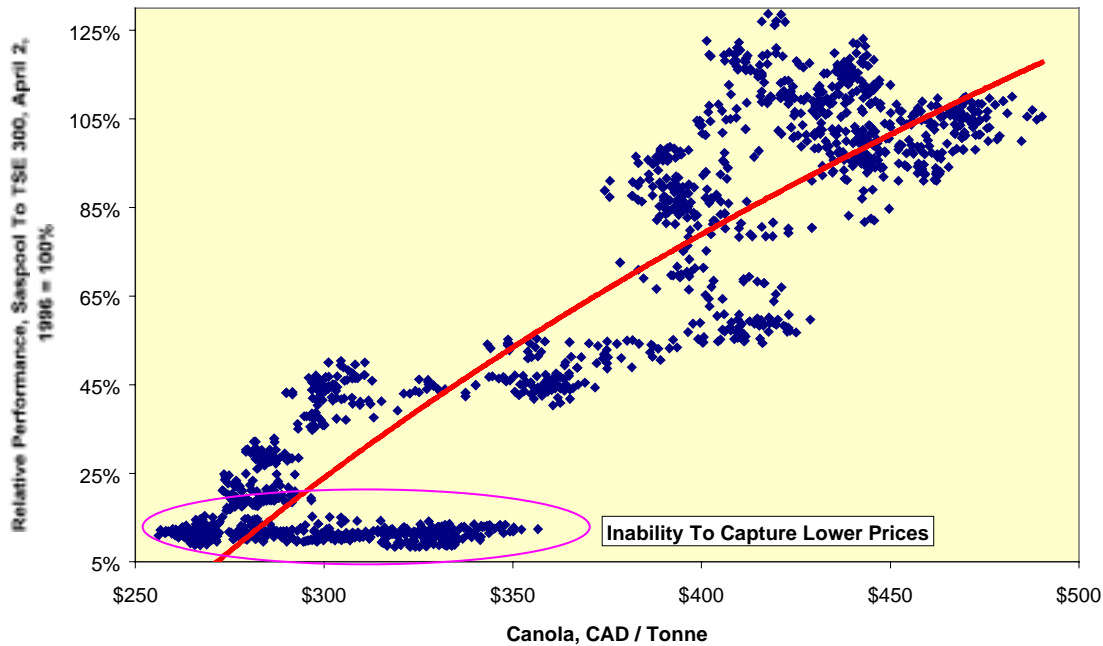
Keep On Trucking



A Slippery Situation

It's always dangerous to think we've discovered some universal principle in markets that will hold 100% of the time. In the case of commodity consumers, we must ask what will happen if the firm cannot benefit from lower prices? This situation is relatively common amongst state marketing boards who have to maintain high prices to producers for political reasons. Let's take the case of the Saskatchewan Wheat Pool, or Saspool as it is known north of the border. The firm has a significant exposure to canola, the source of high-quality edible oil that competes with both soybean oil and palm oil. Saspool has to pay attention to both provincial politics and Canadian national agricultural policies. As a result, it can neither cut back on costs when oil prices fall nor capture the benefits fully when prices rise.

Problems On The Prairies



This is a worst of all possible worlds situation. Over the past five years, Saspool has underperformed the Toronto Stock Exchange 300 index – an index dominated only recently by technology highfliers such as Nortel and JDS Uniphase, but whose largest single group is now financial services – by nearly 130%.

If the trendline from this chart looks like the profit profile of a short put option on canola, a commodity-linked equity trade is suggested immediately: If you own the stock against the index, all you need to do to hedge the commodity exposure is buy a canola put option.

Nothing But Opportunity

Experienced traders recognize instinctively that simple systems and rules work better and more reliably than complex and overwrought construct dependent on esoteric mathematics and complex rule hierarchies. If we liken trading models to biological systems, we find the complex methods to be like beautiful, fragile coral reefs that get clobbered by the slightest disruption to their environment. It's far better for a trading system to copy the dull but durable ecosystems, like temperate forests, that can roll with the punches.

If the linkages between commodities and equities described above seem complex in their design, take heart in that they will be simple in their execution once the basic equity derivative contracts are up and trading.